FIRST CALL FOR PAPERS

SOFSEM 2006

32nd Conference on
Current Trends in Theory
and Practice of Computer Science

January 21 - 27, 2006, Hotel VZ MĚŘÍN, Czech Republic

http://www.sofsem.cz

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Submission deadlines:	Abstracts:	**August 15, 2005**
	Full papers:	**August 22, 2005**

SOFSEM (SOFtware SEMinar) is an annual international conference devoted to the theory and practice of **Computer Science**.
Its aim is to the foster co-operation among professionals from academia and industry working in various areas of Computer Science.
The program consists of series of *Invited Talks*, given by prominent professionals and researchers, *Contributed Talks* selected by the Program Committee from submitted papers, *Working Sessions* discussing work-in-progress, and the *Student Research Forum*. **SOFSEM** offers a unique opportunity to quickly obtain a representative overview of the areas that are selected as the topics of the year. To avoid excess diversity among the conference participants and foster the atmosphere of close professional interaction, **SOFSEM** is organized in tracks with topics narrow enough to attract a community of researchers that share very specific fields of interest. The schedule is tailored so that a unique opportunity to interact with other participants (invited speakers, researchers, students) of the tracks is given. **SOFSEM** provides an ideal framework for discussions and meetings, for establishing personal contacts, and for socializing. **SOFSEM** is especially suited for young computer scientists.

Invited Speakers

- ❖ *Foundations*
  - ❑ *S. Barry Cooper (UK)*: How Can Nature Help Us Compute?
- ❖ *Wireless, Mobile, Ad Hoc and Sensor Networks*
  - ❑ *Sotiris Nikoletseas (Greece):* Models and Algorithms for Wireless Sensor Networks (Smart Dust)
  - ❑ *Christian Schindelhauer (Germany)*: Mobility in Wireless Networks
- ❖ *Database Technologies*
  - ❑ *Georg Gottlob (Austria):* Monadic Queries over Tree Structured Data
- ❖ *Semantic Web Technologies*
  - ❑ *Marie-Christine Rousset (France):* Somewhere in Semantic Web
  - ❑ *Dimitris Plexousakis (Greece)* (title to be announced later)

(The list to be completed)

For the **SOFSEM 2006** the following 4 tracks with selected topics have been chosen:

- ❖ *Foundations* (Track Chair & PC Co-Chair: **Gerard Tel,** *University of Utrecht, The Netherlands*)
  Recognized core areas of Computer Science Foundations are the study of Algorithms and Complexity, and of Languages and Semantics. Both subjects have traditionally received a lot of attention at SOFSEM conferences, since the birth of SOFSEM in 1974. Through all these years, theoretical studies have had their impact on implemented systems. For example, planarity testing is now used in network drawing tools, and semantics is applied in automated program verification packages.
  All contributions to the Foundations of Computer Science are welcomed, but in both areas we especially seek contributions that illustrate the value of fundamental research for fielded applications.

- Algorithms
- Artificial Intelligence and Robotics
- Coding, Cryptography, Compression
- Computational Biology, Chemistry, Geometry, Linguistics, ...
- Distributed or Parallel Computing
- Language and Automata Theory
- Programming Logic and Calculi
- Specification and Verification Tools
- Speech Understanding and Natural Language Processing

❖ **_Wireless, Mobile, Ad Hoc and Sensor Networks_** (Track Chair & PC Chair: **Jiří Wiedermann,** _Institute of Computer Science, Prague, Czech Republic_)

The rapidly growing area of mobile ad hoc networking and computing emerges from the integration among personal and distributed computing, distributed sensing, wireless multihop communication and web technologies. Unprecedentedly growing amount of interaction between communication and computing, its versatility and mobility is changing the information access, exchange and exploitation. Many challenges need to be overcome in this research area to realize its potential. The track intends to cover such challenges.

The relevant topics include, but are not restricted to the following aspects of wireless, mobile, ad-hoc, and sensor networks:

- Formal Models and Architectures
- Algorithms and Their Analysis
- Distributed Systems, Database and Multimedia Aspects
- Integration and Inter-Networking
- Security, Privacy and Fault-Tolerance
- Simulation and Performance
- Implementations and Experiments
- Applications

❖ **_Database Technologies_** (Track Chair & PC Co-Chair: **Jaroslav Pokorný,** _Charles University, Prague, Czech Republic_)

Database systems are increasingly used to store and query XML data. During the last few years, a variety of companies have developed so called native XML databases. These software products are designed to efficiently store and manage the growing numbers of XML data users are creating, especially in Web interactions. Improving their effectiveness, increasing efficiency, and reducing inaccuracies are seen as a challenge for database research today.

The track is aimed at academics, practitioners, users and vendors who are interested in XML data management in a database way. We invite them to share their experiences, results, and contributions, which may help better understand the issues and reality of XML databases.

The relevant topics include, but are not restricted to the following areas of interest:

- Indexing and Querying XML Data
- Approximate Searching in XML Data
- Querying Compressed XML Data
- Storage and Compression of XML Data
- XML Information Retrieval
- XML Benchmarking
- Architectures on Native XML Databases

❖ **_Semantic Web Technologies_** (Track Chair & PC Co-Chair & General Conference Chair: **Július Štuller,** _Institute of Computer Science, Prague, Czech Republic_)

The Semantic Web ideas have already got, in a relatively short time, many advocates together with possibly as many opponents. While on the "Why" side there exists a larger agreement, the "How" side, despite the great efforts of W3C Consortium, divide the proponents in many, unfortunately too many, more or less isolated communities. Nevertheless many well-known companies are involved, similarly as a large number of researchers all around the world, and a lot of interesting research studies and results have already appeared, software tools and methodologies are evolving, new applications are realized.

All contributions to the Semantic Web Technologies are welcomed, especially on topics which include, but are not restricted to the following areas of interest:

- Languages, Tools and Methodologies for Semantic Web Data
- Ontology Creation, Merging, Extraction, Linking & Reconciliation
- Semantic Integration and Interoperability
- Semantic Web Services: Description, Invocation and Composition
- Semantic Web Middleware
- Searching, Querying and Viewing the Semantic Web
- Data Database Technologies for the Semantic Web
- Semantic Web Inference Scheme and Rules
- Tools and Methodologies for Semantic Web agents
- Semantic Web Trust, Privacy and Security
- Data Semantics
- Semantic Web Mining
- Visualization and Modelling
- User Interfaces
- Semantic Web for e-business and e-learning
- Fundamental Issues
- Semantic brokering
- Knowledge Portals

The Program Committee especially solicits original and unpublished papers on the listed topics.

An integral part of the **SOFSEM 2006** will be the **_Student Research Forum_** (Chair: **Mária Bieliková,** _Slovak University of Technology, Bratislava_) organized with the aim to publish and discuss students' projects in the field of theory and practice of _Computer Science_. The forum will offer students the opportunity to receive feedback on both the originality of their scientific work results and the work in progress. Sufficient space for discussion and exchange of experience will be provided during the forum itself and will continue throughout the **SOFSEM** conference. To be eligible, all authors of the paper must be students (except possibly their advisors). Best paper of the **SOFSEM 2006** Student Research Forum will be selected by the Program Committee and awarded.

Proceedings

Steps have been undertaken to publish the volume with the *Invited* and *Contributed papers* together with the best *Student Research Forum* paper in the *Lecture Notes in Computer Science* series by ***Springer-Verlag*** as has became a tradition in the last years.

Papers describing "work-in-progress" and *Student Research Forum* papers will be published in *local proceedings* (with the corresponding ISBN).

Program Committee Members

Chair: Jiří Wiedermann, (*Czech Republic)*
Co-Chair: Gerard Tel (*The Netherland)*
Co-Chair: Jaroslav Pokorný (*Czech Republic)*
Co-Chair: Július Štuller (*Czech Republic)*

Bernd Amann *(France)*	Henning Fernau (UK)	Dimitris Plexousakis *(Greece)*
Grigoris Antoniou *(Greece)*	Edgar Leonel Chávez González *(Mexico)*	Mark Roantree *(Ireland)*
Barbara Catania *(Italy)*	Juraj Hromkovič *(Germany*)	Václav Snášel *(Czech Republic)*
Zohra Bellahsene *(France)*	Jan Janeček *(Czech Republic)*	Christian Scheideler *(USA)*
Mária Bieliková *(Slovakia)*	Rastislav Královič *(Slovakia)*	Hans-Joerg Schek *(Austria)*
François Bry *(Germany)*	Evangelos Kranakis *(Canada)*	Paul Spirakis *(Greece)*
Stefan Dobrev *(Canada)*	Jan Kratochvíl *(Czech Republic)*	Rainer Unland *(Germany*)
Patrik Floreen *(Finland)*	Una-May O'Reilly *(USA*)	Athena Vakali *(Greece)*
Nissim Francez *(Israel*)	Tadeusz Pankowski *(Poland)*	Peter Vojtáš *(Slovakia)*
Rusins Freivalds *(Latvia)*	Dana Pardubská *(Slovakia)*	Aaron Zollinger *(Switzerland*)
Johann Ch. Freytag *(Germany)*	Lukáš Petrů *(Czech Republic)*	

(The list to be completed)

Important Dates (for all types of submissions):

Submission deadlines:
	Abstracts:	**August 15, 2005**
	Full papers:	**August 22, 2005**
	Notification of acceptance:	**October 3, 2005**
	Final papers due (camera ready, LaTeX, llncs style):	**October 17, 2005**

Location

The Hotel VZ MĚŘÍN is located about 60 km South of Prague on the right shore of Slapská přehrada ("Slapy Dam" - see **SOFSEM** web page http://www.sofsem.cz/ for more details).

Organizers

The *32nd* **SOFSEM 2006** is organized by:

➢ Institute of Computer Science, Academy of Sciences of the Czech Republic, Prague
➢ Charles University, Prague
➢ Action M Agency, Prague
➢ Czech Society for Cybernetics and Informatics
➢ Slovak Society for Computer Science.

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